

WE CLAIM:

1. A method comprising:
providing a cavity having at least one opening over which a piece of sealing
material is positioned, the cavity containing liquid;
5 puncturing the piece of sealing material with an instrument, thereby creating a
sealing material opening for a period of time;
applying a vacuum to the cavity; and
noting a cavity pressure approximately when a first bubble forms around gas
entering the liquid through the sealing material opening.
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2. The method of claim 1, where the cavity pressure is greater than or equal to 10
millimeters of mercury and less than or equal to 505 millimeters of mercury.
3. The method of claim 1, where the cavity pressure is greater than or equal to 75
15 millimeters of mercury and less than or equal to 505 millimeters of mercury.
4. The method of claim 1, where the cavity pressure is less than or equal to 505
millimeters of mercury.
- 20 5. The method of claim 1, further comprising:
retracting the instrument from the piece of sealing material; and
where the sealing material opening possesses a size that decreases after the
instrument is retracted.
- 25 6. The method of claim 1, where the providing comprises:
providing a cylinder having a sealed top opening, a bottom opening, an inner wall
defining a cavity, and a piece of sealing material positioned over the
bottom opening.
- 30 7. The method of claim 1, where the instrument is controlled using a robot.

8. The method of claim 1, where the method is a method for testing the utility of a piece of sealing material for a lens molding operation, and where the method further comprises:

5 repeating the providing, puncturing, applying, and noting for at least a second piece of sealing material; and
selecting a piece of sealing material among those tested for use in the lens molding operation.

9. The method of claim 8, where the piece of sealing material includes silicone and
10 the second piece of sealing material includes neoprene.

10. The method of claim 1, further comprising:
tracking any liquid loss through the sealing material opening.

11. The method of claim 1, where the applying a vacuum comprises applying a
15 vacuum using a venturi.

12. The method of claim 1, where the providing comprises:
providing a cylinder having a sealed top opening, a bottom opening, an inner wall
20 defining a cavity, and a piece of sealing material positioned over the bottom opening, and where the at least some liquid is introduced into the cavity after the piece of sealing material is positioned over the bottom opening.

13. The method of claim 1, where the piece of sealing material comprises silicone.
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14. A method of evaluating the self-sealing nature of a piece of material, the method comprising:
piercing a piece of material with an instrument, the piece of material being
30 positioned over an opening to a cavity containing liquid, the piercing creating a puncture opening;

retracting the instrument from the piece of material;
applying a vacuum to the cavity; and
noting a cavity pressure approximately when a first bubble forms within the liquid
near the puncture opening.

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15. A method comprising:

providing a cavity defined by at least a portion of a mold and a closure member
attached to the portion of the mold, the portion of the mold being oriented
substantially vertically and having a top and a bottom, and a sealing material
being positioned near the bottom and attached to the closure member;
puncturing the sealing material and the closure member with an instrument near
the bottom, the puncturing creating an opening in the sealing material; and
introducing a polymerizable composition into the cavity through the instrument.

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15 16. The method of claim 15, where the sealing material, when tested using the
method of claim 1, yields a cavity pressure that is greater than or equal to 10 millimeters
of mercury and less than or equal to 505 millimeters of mercury.

17. The method of claim 15, where the sealing material, when tested using the
method of claim 1, yields a cavity pressure that is greater than or equal to 75 millimeters
of mercury and less than or equal to 505 millimeters of mercury.

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18. The method of claim 15, further comprising:

retracting the instrument from the cavity after the introducing;

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where the opening in the sealing material has a size, and the sealing material
possesses a self-sealing property that reduces the size of the opening after the
instrument is retracted.

19. The method of claim 15, further comprising:

rotating the portion of the mold about a horizontal axis passing through the
portion of the mold.

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20. The method of claim 19, where the rotating includes rotating the portion of the mold 90 degrees about a horizontal axis passing through the portion of the mold.
- 5 21. The method of claim 15, further comprising:
retracting the instrument from the cavity after the introducing; and
rotating the portion of the mold about a horizontal axis passing through the
portion of the mold.
- 10 22. The method of claim 21, where the rotating includes rotating the portion of the mold 90 degrees about a horizontal axis passing through the portion of the mold.
23. The method of claim 18, further comprising:
polymerizing the polymerizable composition to form an optical lens.
- 15 24. The method of claim 15, where the cavity is further defined by a piece of vent tape positioned near the top and attached to the closure member.
25. The method of claim 24, where the piece of vent tape is configured to allow air,
20 but not the polymerizable composition, to pass through the piece of vent tape.
26. The method of claim 15, where the portion of the mold oriented substantially vertically comprises at least two mold pieces having edges, and the closure member is attached to the edges of the at least two mold pieces.
- 25 27. The method of claim 15, further comprising:
polymerizing the composition to form an optical lens within four minutes.
28. The method of claim 15, further comprising:
30 polymerizing the composition to form an optical lens within seven minutes.

29. The method of claim 15, further comprising:
polymerizing the composition to form an optical lens within ten minutes to two
hours.
- 5 30. The method of claim 15, where the sealing material includes silicone.
31. A method for making a lens, the method comprising:
providing a vertically-oriented molding cavity having a top and a bottom and
being defined by at least (a) a first mold piece having a concave surface, (b) a
10 second mold piece having a convex surface, and (c) a closure member
disposed around and attached to the first and second mold pieces, a sealing
material being connected to the closure member and positioned near the
bottom;
puncturing the sealing material and the closure material near the bottom, the
15 puncturing creating an opening in the sealing material;
introducing a polymerizable composition into the cavity through the instrument;
retracting the instrument from the cavity;
rotating the molding cavity; and
polymerizing the polymerizable composition to form the lens;
20 where the opening in the sealing material has a size that reduces after the
instrument is retracted.
32. The method of claim 31, where the sealing material, when tested using the
method of claim 1, yields a cavity pressure that is greater than or equal to 10 millimeters
25 of mercury and less than or equal to 505 millimeters of mercury.
33. The method of claim 31, where the sealing material, when tested using the
method of claim 1, yields a cavity pressure that is greater than or equal to 75 millimeters
of mercury and less than or equal to 505 millimeters of mercury.
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